Environmental Product Declaration

In accordance with ISO 14025 for:

ERA S

Tubular motor for shutters, interior blinds and small awnings applications from 3Nm to 13Nm

From:
Nice S.p.A.

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An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

Company information

True freedom is an open world.

This is the aspiration, the *vision* of Nice, a global leader in the **Home Management Solutions**.

A *mission* that aims to improve people's quality of life by **simplifying the everyday** , while making experiences enjoyable and places more sustainable.

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The Nice world

Founded in 1993 in Oderzo (Treviso) by Lauro Buoro, current Chairman, Nice designs, manufactures and commercialises integrated and connected solutions for applications in residential, commercial and industrial contexts, in the field of:

- Gates and Barriers
- Doors & Industrial Doors
- Sun Shading
- Smart Home
- Audio/Video and Power Management
- Smart Security
- Health & PERS

Today Nice count on an organization of more than 2,800 people on 5 continents, with a rich background of competences and different cultures, as well as 15 R&D centers (Italy, Germany, Poland, Brazil, USA, South Africa, Canada, India, Russia, China, Australia) and 13 production plants (Germany, Italy, Poland, Brazil, USA, Australia, South Africa and Canada) serving its partners and customers in over 100 countries worldwide.

Thanks to its global presence, Nice contributes to promoting the excellence, style and know-how of *Made in Italy* in the world with the high quality of its Home Automation solutions: products that skilfully combine technology, design, innovation and ease of use.

The value of Sustainability – Nice*Love*Earth

For Nice sustainability means ensuring comfort and wellbeing, simplifying people's daily gestures, thanks to the quality and advanced technology of its products, which reduce the environmental impact of living spaces.

For people

Nice is actively committed to improving people's quality of life, making it more sustainable, by developing solutions that optimise the management of natural light and heat. Wellbeing is a top priority for Nice, thanks to the solutions for humidity control, intelligent heating and cooling, air quality measurement, carbon monoxide detection and notification in case of dangerous situations, in order to always guarantee the right environmental conditions to protect the wellbeing of people living in the home.

For products

Nice is committed to lowering the environmental impact of its products, following ecodesign principles, reducing the energy consumption of home automations and using recycled materials. The packaging of the products is made of natural cardboard, 100% recyclable, all plastic parts have been removed and instructions are available in digital format. Furthermore, in a circular economy perspective, Nice works to limit the production of industrial waste, encouraging recovery systems.

For buildings

Nice technology makes life for individuals and communities more connected, easier and safer, ensuring greater well-being inside buildings. The application of Nice solutions contributes to making buildings sustainable, minimising the environmental impact of our homes, promoting energy efficiency through intelligent control of heating, cooling, lighting and monitoring of electrical loads to reduce consumption. Nice is a facilitator of simple daily gestures that can have a great impact on the entire planet and encourage the green evolution of buildings.

NiceLoveEarth

Nice Innovation

Nice continuously invests in its 15 research and development centres located in **Italy**, **Poland**, **Germany**, **Brazil**, **USA**, **Canada**, **South Africa, India and China**. This is where the international R&D team operates, made up of highly specialized professionals who, in addition to performing rigorous and accurate tests to ensure the highest standards of quality and safety, work constantly to study, develop and implement cutting-edge solutions able of meeting, and anticipating market demands.

*"Human capital - declares **Lauro Buoro, Chairman and Founder of Nice** - is a fundamental asset for the development and expansion strategy of our company. Thanks to the excellent professionals who work in Nice and to their ideas, we create innovation to facilitate even the smallest daily gestures".*

Product information

Era S motor's family covers shutters, interior blinds and small awnings applications from 3Nm to 13Nm. Particularly suitable for compact installations. Ideal in environments where the noise level must be reduced to a minimum. Intuitive adjustment of up and down limit positions, thanks to the mechanical limit switch. Easy to install thanks to the new compact support and innovative click system to fasten the drive wheel. Wired and/or radio connection to climatic sensors via external control units. Time saving and simple electrical connections; thanks to the double ins.
This EPD refers to the following products:

- Era S 3Nm 24 rpm: ES324
- Era S 5Nm 24 rpm: ES524
- Era S 6Nm 11 rpm: ES611
- Era S 10Nm 11 rpm: ES1011
- Era S 13Nm 11 rpm: ES1311

The functional unit is a motor that can provide a mechanical power rating of 10 W for moving an object.
Mechanical power is calculated as torque per speed in gearmotors for angular movements.

TECHNICAL INFORMATION	U.M.	ES324	ES524	ES611	ES1011	ES1311
Nominal torque	Nm	3	5	6	10	13
Angular speed	rpm	24	24	11	11	11
Electric power assimilated in the motion phase	W	120	120	110	120	120
Electric power assimilated in the stand-by phase	W	0.54	0.54	0.54	0.54	0.54

TECHNICAL INFORMATION	U.M.	ERA S series
Time for performing one operating cycle	s	60
Number of cycles per day*	N	4
Reference service life	Y	10

* The complete opening and closing of an application.

The presence of the different materials in the ERA S family is reported below:

MATERIALS	PERCENTAGE
Metals	64,2%
Plastic	15,1%
Circuit boards	3,0%
Cables and connectors	16,6%
Other	1,1%

The products do not contain any of the substances of very high concern (SVHC) regulated by the Regulation (EC) No 1907/2006 (REACH) or the Regulation (EC) No 1272/2008 of European parliament.

Nice Green Products, with specific technological innovations or materials that permit **energy efficency of the buildings** and a **low impact on the environment.**

Methodology

Inventory analysis was conducted using specific data from Nice S.p.A., relating to the year 2023 and to the production site "Nice 2". The data refer to the consumption of raw materials and electricity, the production of the gearmotor and the waste connected to it.

Selected generic data from international databases were used (in particular SimaPro 9.6.0.1 and Ecoinvent 3.10) regarding the production processes of raw materials and auxiliary materials used for the gearmotor production, generation and distribution of electricity, means of transport and waste treatment processes related to the production that takes place in the Nice plant. In the reference year, Nice used energy 100% renewable in its facilities.

Data on ground transportation distances were calculated using the Google Maps online calculator and those by sea using the Searates online tool.

The calculation method adopted for the LCA study reported in this EPD is described in the document "GPI for an International EPD® System" version 3.01, while the characterization factors, used to convert the data deriving from the inventory analysis of the life cycle in impact categories, are described in the reported at www.environdec.com.

LCA information

Functional Unit

Following the indications of the PCR 2019:11 version 1.0.3, the functional unit for the life cycle is represented by a drive capable of assure a rated output equal to 10 W for the movement of an object.

The complete use phase has been calculated during the service life of 10 years, as defined in the Product Category Rules (PCR) 2019:11.

System borders

The present study is defined "from-cradle-to-grave", therefore the life cycle of the product for automation under study is subdivided into Upstream, Core and Downstream phases. The EPD only refers to the gear motor and no other components that can be necessary for the movement of an automation (transmitters, sensors, tracks or other accessories).

Upstream phase includes the production of all the materials (raw and auxiliary) that enter the production process, as detailed below:

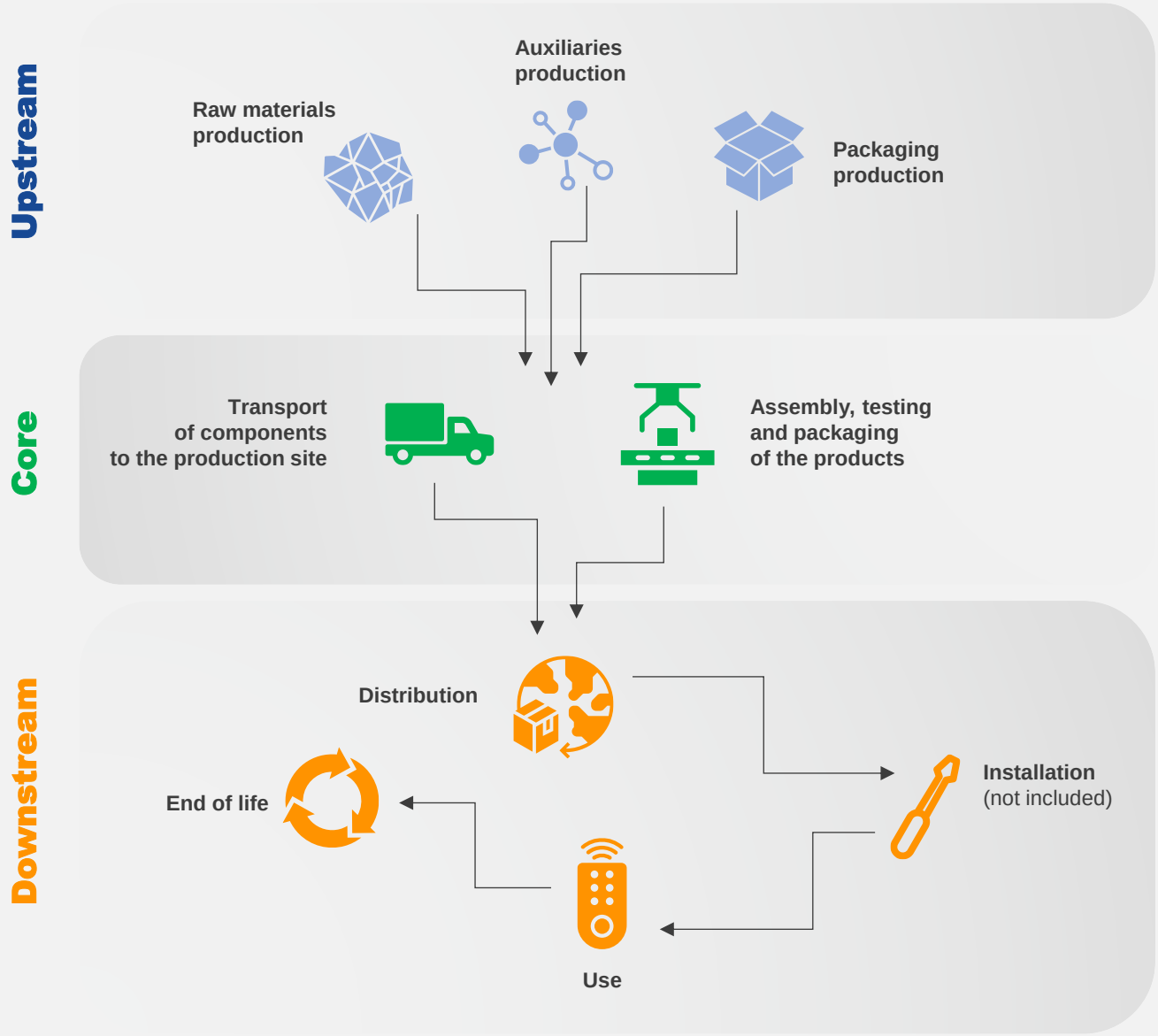
- operations of extraction, transport and treatment of resources;
- the production of raw materials (components) that make up the product, including their packaging;
- the production of auxiliary for the assembly, printing and lubrication materials;
- packaging production;
- the production of electricity and fuels used at the companies that produce the materials described in the previous points.

Core phase includes the following processes, which are associated with transport and processing that combine to create the finished product:

- transport of materials from the place of production to the manufacturing site. The specific transport of every component has been calculated; for the suppliers of Nice's suppliers, an estimated distance of 100 km has been applied.
- consumption of electricity for product assembly;
- storage and packaging;
- treatment of waste produced during manufacture;

Finally, the Downstream phase includes the following processes, which take place outside the plant and involve the finished product:

- transport from production site to the final retailer, estimated from the products that will be substituted on the market;
- use of the product (throughout its reference service life);
- Substitution of pieces during the RSL (production and end-of-life of substituted items);
- end-of-life of the product after use;
- end-of-life of packaging after use.



Data quality and cut-off

In accordance with the cut-off rule, flows less than 1% of the total inventory were excluded, i.e.:

- construction of company plants and processing machinery (with a life of more than three years);
- staff travel and home-work transfers;
- research and development activities;
- the materials necessary for cleaning the machinery;
- product installation and its maintenance.

Energy consumption calculation:

Based on the technical information regarding the product, energy consumption in the use phase has been calculated as follow:

$$\text{Consumption } [kWh/y] = \left[\left(\frac{P_m}{1000} \times t_m\right) + \left(\frac{P_s}{1000} \times t_s\right)\right] \times 24 \times 365$$

Where:

Pm = electric power assimilated in the motion phase [W]

tm = motion ratio [%]

Ps = electric power assimilated in the stand-by phase [W]

ts = stand-by ratio [%]

Motion ratio is a measure of the period the gear motor spends applying force/torque to move an object, i. e. an automation system. It has been calculated as

$$t_m = \frac{T \times C}{3600 \times 24}$$

Where:

T = time for performing one operating cycle [seconds]

C = number of cycles per day [number]

For this product, the calculation has been integrated with assumptions from the gear motor's designers, resulting in a motion ratio equal to 0,28% for ERA S products.

Stand-by ratio has been therefore calculated as:

$$t_s = 1 - t_m$$

The presented formula refers to the electricity that the product consumes in one year (kWh/y); the complete use phase has been therefore calculated for the service life of 10 years (PCR 2019:11).

EPD validity

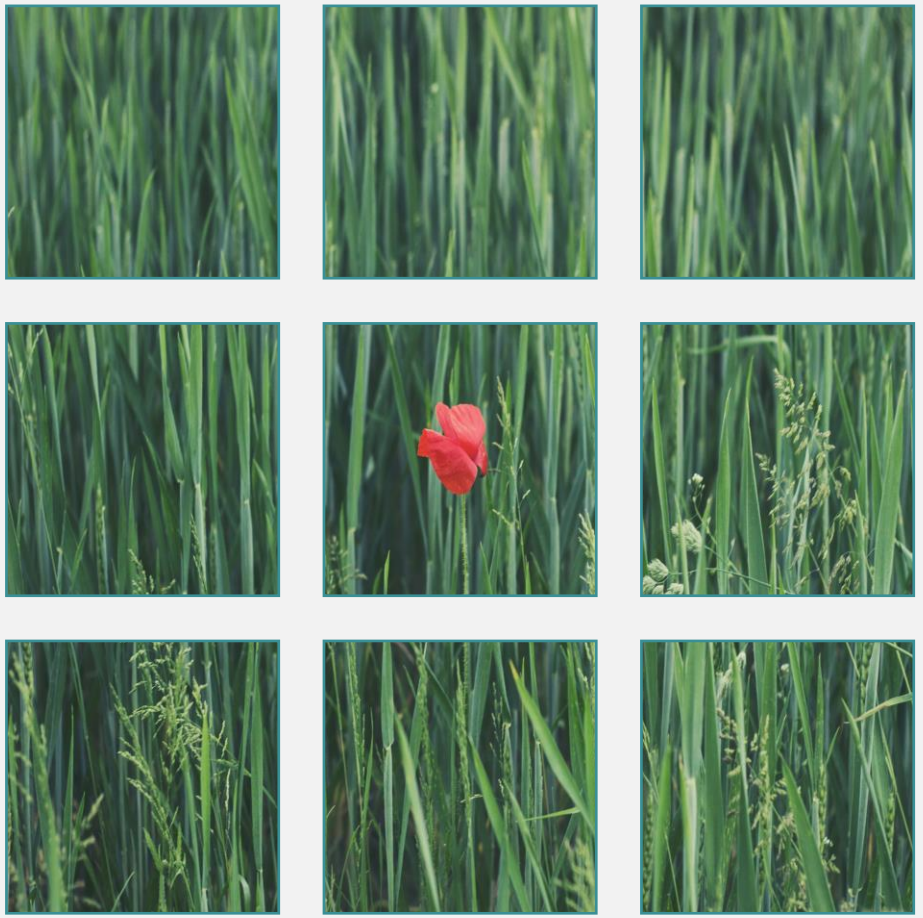
This EPD is valid globally and has a validity of 5 years starting from the approval date.

Environmental performance

In order to reach the results reported below, the most recent databases on the production of materials, the production cycles in the metallurgical and chemical sector, transports and energy systems were used (Sphera and Ecoinvent).

The impact categories are:

- Global warming potential (GWP)
- Acidification potential (AP)
- Eutrophication potential (EP) freshwater, marine and terrestrial
- Photochemical oxidant formation potential (POFP)
- Abiotic depletion potential – Elements
- Abiotic depletion potential – Fossil resources
- Water scarcity potential
- Use of resources



ERA S 3Nm 24rpm

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	9,85E+00	5,26E-02	2,43E+00	5,24E+01	6,48E+01
	Biogenic	kg CO_2 eq.	4,29E-02	8,29E-04	3,18E-03	1,13E-01	1,60E-01
	Land use and land transformation	kg CO_2 eq.	1,56E-02	5,31E-03	1,42E-04	1,42E-01	1,63E-01
	TOTAL	**kg CO_2 eq.**	9,91E+00	5,87E-02	2,44E+00	5,27E+01	6,51E+01
Acidification potential (AP)		mol H+ eq.	2,81E-01	3,61E-04	6,54E-03	2,32E-01	5,20E-01
Eutrophication potential (EP) - freshwater		kg P eq.	1,35E-02	3,60E-07	4,91E-05	3,23E-02	4,59E-02
Eutrophication potential (EP) - marine		kg N eq.	1,77E-02	1,16E-04	2,01E-03	3,69E-02	5,67E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	2,14E-01	1,28E-03	2,10E-02	3,41E-01	5,77E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	7,54E-02	4,08E-04	5,99E-03	1,40E-01	2,21E-01
Ozone depletion (ODP)		kg CFC-11 eq.	5,91E-07	9,81E-10	9,42E-09	6,25E-07	1,23E-06
Abiotic depletion potential – Elements*		kg Sb eq.	2,70E-03	1,51E-09	3,42E-08	4,98E-04	3,20E-03
Abiotic depletion potential – Fossil resourses*		MJ	6,32E+01	9,14E-03	6,82E-01	4,38E+02	5,01E+02
Water scarcity potential*		m^3 eq.	4,83E+00	1,78E-02	4,26E-02	1,60E+01	2,09E+01

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resourses

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resourses Renewable	Use as energy carrier	MJ	2,14E+01	2,57E+00	1,22E-01	1,73E+02	1,98E+02
	Used as raw materials	MJ	4,09E+00	0,00E+00	0,00E+00	6,10E-03	4,10E+00
	TOTAL	MJ	2,54E+01	2,57E+00	1,22E-01	1,73E+02	2,02E+02
Primary energy resourses Non-renewable	Use as energy carrier	MJ	5,37E+01	9,14E-03	6,82E-01	4,36E+02	4,90E+02
	Used as raw materials	MJ	9,47E+00	0,00E+00	0,00E+00	1,74E+00	1,12E+01
	TOTAL	MJ	6,32E+01	9,14E-03	6,82E-01	4,38E+02	5,01E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	1,34E-01	3,98E-03	2,39E-03	8,45E-01	9,85E-01

ERA S 5Nm 24rpm

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	5,91E+00	3,15E-02	1,67E+00	1,36E+01	2,12E+01
	Biogenic	kg CO_2 eq.	2,58E-02	4,97E-04	5,02E-03	3,46E-02	6,59E-02
	Land use and land transformation	kg CO_2 eq.	9,37E-03	3,18E-03	9,02E-05	1,62E-01	1,75E-01
	TOTAL	**kg CO_2 eq.**	5,95E+00	3,52E-02	1,67E+00	1,38E+01	2,14E+01
Acidification potential (AP)		mol H+ eq.	1,68E-01	2,17E-04	4,48E-03	4,31E-02	2,16E-01
Eutrophication potential (EP) - freshwater		kg P eq.	8,13E-03	2,16E-07	3,15E-05	5,92E-03	1,41E-02
Eutrophication potential (EP) - marine		kg N eq.	1,06E-02	6,99E-05	1,48E-03	9,53E-03	2,17E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	1,28E-01	7,70E-04	1,54E-02	8,96E-02	2,34E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	4,52E-02	2,45E-04	4,64E-03	3,50E-02	8,52E-02
Ozone depletion (ODP)		kg CFC-11 eq.	3,55E-07	5,88E-10	9,78E-09	2,13E-07	5,78E-07
Abiotic depletion potential – Elements*		kg Sb eq.	1,62E-03	9,09E-10	2,80E-08	7,81E-06	1,63E-03
Abiotic depletion potential – Fossil resourses*		MJ	3,79E+01	5,49E-03	4,41E-01	2,39E+02	2,77E+02
Water scarcity potential*		m^3 eq.	2,90E+00	1,07E-02	2,77E-02	4,53E+00	7,47E+00

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NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resourses

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resourses Renewable	Use as energy carrier	MJ	1,28E+01	1,54E+00	8,25E-02	1,45E+02	1,60E+02
	Used as raw materials	MJ	2,46E+00	0,00E+00	0,00E+00	8,75E-05	2,46E+00
	TOTAL	MJ	1,53E+01	1,54E+00	8,25E-02	1,45E+02	1,62E+02
Primary energy resourses Non-renewable	Use as energy carrier	MJ	3,22E+01	5,48E-03	4,41E-01	2,39E+02	2,71E+02
	Used as raw materials	MJ	5,68E+00	0,00E+00	0,00E+00	2,50E-02	5,71E+00
	TOTAL	MJ	3,79E+01	5,48E-03	4,41E-01	2,39E+02	2,77E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	8,02E-02	2,39E-03	2,34E-03	3,02E-01	3,86E-01

ERA S 6Nm 11rpm

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	1,10E+01	5,08E-02	3,12E+00	2,89E+00	1,71E+01
	Biogenic	kg CO_2 eq.	5,40E-02	9,04E-04	1,16E-02	6,95E-02	1,36E-01
	Land use and land transformation	kg CO_2 eq.	1,76E-02	5,79E-03	1,68E-04	3,75E-01	3,99E-01
	TOTAL	**kg CO_2 eq.**	1,11E+01	5,74E-02	3,13E+00	3,33E+00	1,76E+01
Acidification potential (AP)		mol H+ eq.	3,08E-01	5,55E-04	3,92E-03	9,92E-03	3,22E-01
Eutrophication potential (EP) - freshwater		kg P eq.	1,49E-02	3,41E-07	5,87E-05	1,01E-03	1,60E-02
Eutrophication potential (EP) - marine		kg N eq.	1,96E-02	1,59E-04	1,77E-03	4,01E-03	2,56E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	2,37E-01	1,76E-03	1,75E-02	3,38E-02	2,90E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	8,33E-02	5,22E-04	5,90E-03	8,27E-03	9,80E-02
Ozone depletion (ODP)		kg CFC-11 eq.	6,47E-07	8,96E-10	1,95E-08	3,62E-08	7,03E-07
Abiotic depletion potential – Elements*		kg Sb eq.	2,95E-03	1,28E-09	5,50E-08	1,47E-06	2,95E-03
Abiotic depletion potential – Fossil resourses*		MJ	7,16E+01	9,04E-03	8,18E-01	4,61E+02	5,34E+02
Water scarcity potential*		m^3 eq.	5,27E+00	1,94E-02	5,25E-02	6,21E+00	1,15E+01

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resourses

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resourses Renewable	Use as energy carrier	MJ	2,36E+01	2,81E+00	1,59E-01	3,14E+02	3,41E+02
	Used as raw materials	MJ	4,46E+00	0,00E+00	0,00E+00	0,00E+00	4,46E+00
	TOTAL	MJ	2,81E+01	2,81E+00	1,59E-01	3,14E+02	3,45E+02
Primary energy resourses Non-renewable	Use as energy carrier	MJ	6,25E+01	9,04E-03	8,18E-01	4,61E+02	5,24E+02
	Used as raw materials	MJ	9,06E+00	0,00E+00	0,00E+00	0,00E+00	9,06E+00
	TOTAL	MJ	7,16E+01	9,04E-03	8,18E-01	4,61E+02	5,33E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	1,47E-01	4,34E-03	4,98E-03	5,86E-01	7,42E-01

ERA S 10Nm 11rpm

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	6,63E+00	3,05E-02	1,52E+00	4,22E+01	5,03E+01
	Biogenic	kg CO_2 eq.	3,24E-02	5,42E-04	2,68E-03	2,50E-02	6,07E-02
	Land use and land transformation	kg CO_2 eq.	1,05E-02	3,47E-03	9,20E-05	1,13E-02	2,54E-02
	TOTAL	**kg CO_2 eq.**	6,67E+00	3,45E-02	1,52E+00	4,22E+01	5,04E+01
Acidification potential (AP)		mol H+ eq.	1,85E-01	3,33E-04	1,17E-03	8,26E-01	1,01E+00
Eutrophication potential (EP) - freshwater		kg P eq.	8,95E-03	2,04E-07	3,23E-05	7,98E-02	8,87E-02
Eutrophication potential (EP) - marine		kg N eq.	1,18E-02	9,52E-05	5,43E-04	5,15E-02	6,39E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	1,42E-01	1,05E-03	5,09E-03	3,83E-01	5,31E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	5,00E-02	3,13E-04	1,59E-03	1,43E-01	1,95E-01
Ozone depletion (ODP)		kg CFC-11 eq.	3,88E-07	5,38E-10	4,45E-09	1,71E-07	5,64E-07
Abiotic depletion potential – Elements*		kg Sb eq.	1,77E-03	7,70E-10	2,13E-08	4,45E-05	1,81E-03
Abiotic depletion potential – Fossil resourses*		MJ	4,30E+01	5,43E-03	4,44E-01	5,03E+02	5,46E+02
Water scarcity potential*		m^3 eq.	3,16E+00	1,16E-02	2,83E-02	6,28E+00	9,48E+00

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resourses

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resourses Renewable	Use as energy carrier	MJ	1,42E+01	1,68E+00	7,87E-02	1,09E+02	1,25E+02
	Used as raw materials	MJ	2,68E+00	0,00E+00	0,00E+00	5,36E-04	2,68E+00
	TOTAL	MJ	1,69E+01	1,68E+00	7,87E-02	1,09E+02	1,27E+02
Primary energy resourses Non-renewable	Use as energy carrier	MJ	3,75E+01	5,42E-03	4,44E-01	5,02E+02	5,40E+02
	Used as raw materials	MJ	5,43E+00	0,00E+00	0,00E+00	1,34E-01	5,57E+00
	TOTAL	MJ	4,30E+01	5,42E-03	4,44E-01	5,03E+02	5,46E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	8,80E-02	2,60E-03	1,72E-03	4,04E-01	4,96E-01

ERA S 13Nm 11rpm

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	5,19E+00	2,52E-02	1,35E+00	1,31E+01	1,96E+01
	Biogenic	kg CO_2 eq.	2,70E-02	4,17E-04	1,86E-03	3,23E-02	6,16E-02
	Land use and land transformation	kg CO_2 eq.	8,20E-03	2,67E-03	7,88E-05	1,44E-02	2,54E-02
	TOTAL	**kg CO_2 eq.**	5,22E+00	2,83E-02	1,35E+00	1,31E+01	1,97E+01
Acidification potential (AP)		mol H+ eq.	1,45E-01	2,63E-04	1,26E-03	1,32E-01	2,79E-01
Eutrophication potential (EP) - freshwater		kg P eq.	7,18E-03	1,70E-07	2,74E-05	1,41E-02	2,13E-02
Eutrophication potential (EP) - marine		kg N eq.	9,20E-03	7,60E-05	5,67E-04	1,20E-02	2,19E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	1,11E-01	8,40E-04	5,52E-03	9,35E-02	2,11E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	3,91E-02	2,51E-04	1,78E-03	3,49E-02	7,61E-02
Ozone depletion (ODP)		kg CFC-11 eq.	3,00E-07	4,51E-10	5,41E-09	2,05E-07	5,11E-07
Abiotic depletion potential – Elements*		kg Sb eq.	1,40E-03	6,53E-10	2,05E-08	1,87E-05	1,42E-03
Abiotic depletion potential – Fossil resourses*		MJ	3,44E+01	4,42E-03	3,81E-01	3,51E+02	3,86E+02
Water scarcity potential*		m^3 eq.	2,21E+00	8,94E-03	2,40E-02	3,66E+00	5,90E+00

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resourses

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resourses Renewable	Use as energy carrier	MJ	1,12E+01	1,30E+00	6,95E-02	8,00E+01	9,26E+01
	Used as raw materials	MJ	2,06E+00	0,00E+00	0,00E+00	2,10E-04	2,06E+00
	TOTAL	MJ	1,33E+01	1,30E+00	6,95E-02	8,00E+01	9,46E+01
Primary energy resourses Non-renewable	Use as energy carrier	MJ	2,98E+01	4,41E-03	3,81E-01	3,51E+02	3,81E+02
	Used as raw materials	MJ	4,56E+00	0,00E+00	0,00E+00	5,75E-02	4,62E+00
	TOTAL	MJ	3,44E+01	4,41E-03	3,81E-01	3,51E+02	3,86E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	7,83E-02	2,00E-03	1,36E-03	1,79E-01	2,61E-01

Additional Information

The gear motor presented in the EPD responds to the CE marking

Differences versus previous version

Version 0: first publication.

Programme information

Programme

The International EPD® System

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SE-100 31 Stockholm
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Product category rules (PCR): 2019:11: AC and DC Gear Motors for Automation Systems, v. 1.0.3

UN CPC 46111 AND 46112

PCR review was conducted by:
The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com.
Chair of the PCR review: Gorka Benito Alonso

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

☒ EPD Process verification

☐ EPD verification

Third party verifier:
DNV Business Assurance Italy Srl

Procedure for follow-up of data during EPD validity involves third party verifier:

☒ No

☐ Yes

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